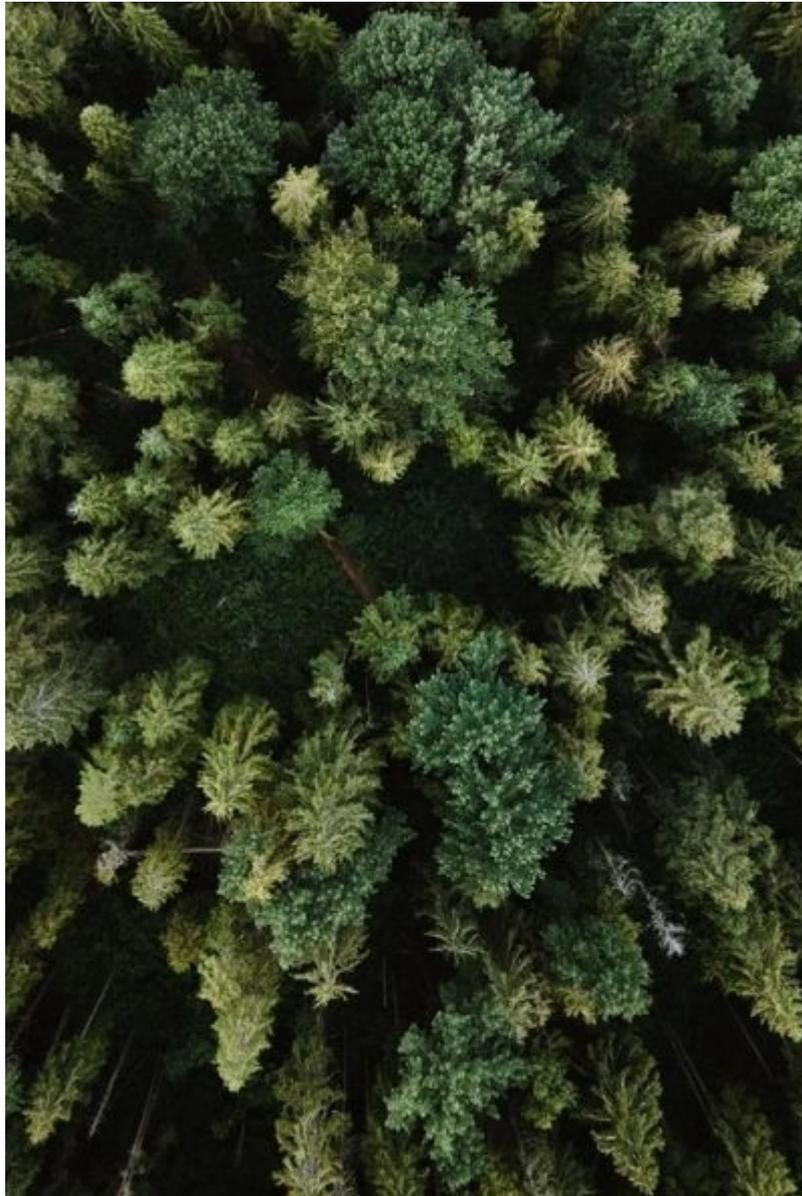


Here's Why Planting Trees Is Not a Quick Fix for Climate Change

 fettlehub.com/heres-why-planting-trees-is-not-a-quick-fix-for-climate-change

April 22, 2021

By Naume Guveya



Carbon dioxide is one of the largest contributors to greenhouse gas emissions. Fortunately, there seems to be a good solution to this problem — some scientists have suggested that planting billions of trees across the world is one of the biggest, most effective, and most economical way of eliminating carbon dioxide.

Perhaps it's for this reason that the tree planting idea has taken root all across the globe, giving many of us the desire to plant as many trees as we can. The idea of reducing the severity of climate change by planting trees is exciting, and frankly, seemingly doable.

One recent study even claimed that Earth's ecosystem could support another 2.2 billion acres of forests, and by planting over 500 billion trees on this land, we could capture around 205 gigatonnes of carbon and reduce atmospheric carbon by about 25%.

That's huge, especially considering that this reduction would equate to halving all the carbon we have emitted since 1960.

Although the team later retracted some of their claims as "incorrect" and containing data with "errors", there's still lots of excitement when it comes to planting trees to fight our current climate change woes.

But are things as simple as just planting trees? Plant trees today, enjoy the benefits tomorrow?

The truth is that while there's potential to use reforestation as a climate change mitigation tool, there are many factors to consider. For instance, there's no way planting trees will ever be a substitute for decreasing fossil fuel or landfill emissions.

So just how viable is tree planting?

The Viability of Tree Planting To Offset Carbon Emissions

Planting a billion hectares of trees is awesome on paper, but in reality, it's a lot of work.

How much money, time, and human resources will we need to implement a project of such magnitude?

For instance, the study assumed that if we planted a million hectares of trees a year, with each hectare containing at least 50 to 100 trees, it would take between one and two thousand years to reforest between one and two billion hectares – yes, that long.

We'd also have to factor in the resources and time required to see the trees to maturity, which can take about 100 years or even more in tropical regions. Then there's the big question of how long it will take the trees to eliminate a significant amount of carbon.

Do we have that much time?

We don't. We no longer have the climate conditions we had 50 or even 10 years ago. We are way behind when it comes to curbing climate change; we must address the problem now.

But that's not all.

When it comes to planting trees and fixing climate change, there's a lot more hanging in the balance besides time and money.

| It's not just a matter of "let's plant trees and everything will be good."

1. Tree emissions, yes those

Before looking at how much carbon the newly planted trees will offset, we need to consider the amount of carbon that will be released into the atmosphere during the massive reforestation.

Trees produce emissions that can contribute to global warming if they react to form methane or ozone. One professor of atmospheric chemistry even went as far as suggesting not to plant trees to save the planet. This was after her calculations revealed that by cutting down forests (thereby preventing any emissions from them), we have created a cooling effect that has slightly offset some of our global warming.

There's also the issue of large tree plantations trapping heat. Trees provide shade, therefore, the more trees you plant, the more shade you create, and the darker the land where the trees are planted. This is a problem because dark surfaces tend to absorb more heat compared to lighter ones. As such, the 'darkness' from the trees' shade helps trap more heat and this warms up the environment.

Put simply, trees may absorb emissions but when we have lots of them in a place, everything may become counterproductive. There's a delicate balance between the trees' ability to reduce global warming and to increase it. Things are not clear-cut, and it's a matter of weighing the potential benefits against the risks.

It's not just a matter of "let's plant trees and everything will be good."

2. The effect of the current climate on reforestation

The climate is going to keep on changing. How is this going to affect the growth of trees? From nutrient availability for the trees to the possibility of increased drought, we don't know if the climate will be able to support massive forest restoration.

3. The effects on biodiversity

Most major tree planting plans don't consider the fact that most of the trees being planted are fast-growing commercial trees like eucalyptus and acacia. Such trees provide little to no biodiversity benefits.

Additionally, while it may seem like a good idea to plant trees in, for instance, the African savanna, what does it mean for its current inhabitants? More trees mean more tree cover, but can grasslands and savanna ecosystems thrive in the cover?

Planting too many trees without much thought is a big no. There are several risks to consider.

Trees, especially those in drier regions, can increase the severity of forest fires. The bad news is that climate change is creating droughts and warmer, drier conditions that are increasing wildfire risk. With the current longer fire season, what do more trees mean in terms of potential megafires?

It's also been shown that replacing grasslands with plantations reduces streamflow. What does this mean for water availability? Do we want to trade water for carbon emissions reduction? Is that such a great solution given the fact that water scarcity is already a current hot issue?

These questions require answers.

It's time to pause, take a step back, and think of the consequences.

4. The socio-economic and socio-political repercussions

Let's plant billions of trees! But where?

First, trees are land-hungry. Is there space to plant billions of trees? What does this mean on the socio-political and socio-economic fronts?

The world is experiencing exponential population growth and more people need land to set up their homes. With not so much idle land left, are people willing to dedicate some of their land to tree planting? The idea of giving up land for tree planting may not play out so well in areas where people are scrambling for land to build homes.

Second, remember the issue of large tree plantations affecting water availability? Well, this doesn't just affect the animals – we are also included. A reduction in water flow could have a serious negative impact on water supply for the many communities already grappling with critical water shortages.

Lastly, how might converting non-forest land to forests compete with food production and what does this mean for the hundreds of millions of people battling food insecurity? Keeping land for food production seems more feasible than keeping it for tree planting.

Time to Ask Some Questions

“A lot of tree planting is being done with the aim of reversing climate change, but will planting a billion hectares of new trees actually cool our planet?”

There are many questions, but when all is said and done, we need to go back to the ultimate big question. A lot of tree planting is being done with the aim of reversing climate change, but will planting a billion hectares of new trees actually cool our planet?

Perhaps planting trees will restore our degraded ecosystems and mitigate the impact of climate change. There's potential there, but we need to ditch any “quick-fix” ideas we have and look at the big picture.

Trees can absorb emissions and they are relatively easy to plant, but what are we doing to cut the emissions? Before we look at trees as part of the solution to the mess we are creating, are we making an effort to correct the lifestyles that are causing the problem in the first place?

It's pretty obvious, but we'll just say it again – saving our planet is going to take more than planting trees.

Besides planting trees, what other actions do you think would be great for curbing global warming? Join the conversation and share your thoughts.